

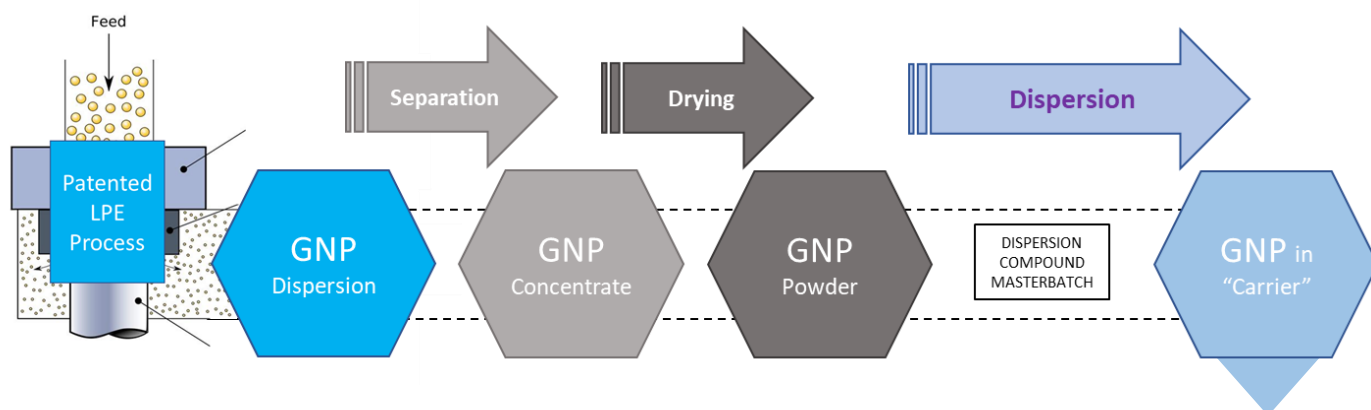
Technical Data Sheet

Product Name	GEM B25L
Product Code	GMB1325-B25L
Description	GraphCore™ 01 GEM 5% in TPU(B25L)
Form	MB—5% in TPU
Issue Date	V1—May 01, 2024

Black Swan Graphene Inc. (“Black Swan”) (TSX-V: SWAN) (OTCQB: BSWGF) (Frankfurt: R96), is focused on the large-scale production and commercialisation of patented high-performance and low-cost graphene products aimed at several industrial sectors, including concrete and polymers. Black Swan is a global leader in the development and supply of graphene nanoplatelets (GNP) for use in new and emerging technologies.

GEM B25L (GMB1325-B25L) is a member of the **GraphCore™ 01** Family of graphene nanoplatelets. It is supplied in masterbatch form as 5% loaded in thermoplastic polyurethane (TPU). The product is manufactured using patented liquid phase exfoliation process incorporating ~3%wt non-ionic surface agent, and compounded using twin-screw extrusion.

The ISO-standard manufacturing process uses a carefully selected graphite being dispersed in a liquid medium (typically water) using our surface chemistry know-how. Our manufacturing process yields reliable quality GNPs in dispersion, powder or masterbatch forms.



MASTERBATCH	
Product Code	GMB1325-B25L
Surface agent	Non-ionic on GNP
Form	MB—5% in TPU
Colour	Black

Product Code	GMB1325-B25L
Description	GraphCore™ 01 GEM 5% in TPU (B25L)
Form	MB—5% in TPU

Nominal Composition: Graphene Enhanced Masterbatch

Graphene Content:	5%
Polymer Carrier:	TPU (ether)
Additives:	None

General

GMB1325-B25L is a concentrate of Graphene nano platelets (5%) designed to be dosed at 5-20% in the final product.

Designed for use in moulding and extrusion, based on a general-purpose thermoplastic polyurethane (TPU).

Possible to increase in some mechanical properties of TPU articles by up to 30%.

It is recommended to conduct a ladder study in order to evaluate the end user performance requirement.

Typical processing temperatures are 200 – 220 °C.

Specification

Properties	Test Method	Units	Limits
Loading	TGA Under Nitrogen	%	4 - 6
Filter Dispersion	TBC	---	TBC
Density	TBC	g/cm ³	TBC
Moisture Content	Weight loss at 105°C at time of packing	%	0.1 - 0.3

Packaging

Black Swan **G**raphene **E**nanced **M**asterbatches are typically available in sealed 25kg Polyethylene Bags. Other forms are available on request and include bulk packaging such as Big Bags, Octabins and Tankers

GEM Products must be stored in cool dry conditions.